JAMAICA. OCTOBER 4, 1883. No. 31.

JAMAICA RAINFALL

FROM ABOUT 1870 TO THE END OF 1879.

PART I.

For Part 2 see No 32

FROM THE SUPPLEMENT TO THE JAMAICA GAZETTE.

October 4th, 1883.

WITH ADDITIONS AND CORRECTIONS.

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Colonial Secretary's Office,

6th September, 1883.

THE MAJOR-GENERAL ADMINISTERING THE GOVERNMENT directs the publication, for general information, of the following article by Mr. Maxwell Hall on the Rainfall of Jamaica from 1870 to 1879.

By command,

E. N. WALKER, Colonial Secretary.

THE JAMAICA RAINFALL,

From about 1870 to the end of 1879.

PART I.

The following Registers of the Rainfall kept at 61 places in the Island of Jamaica have been most carefully compiled; they are for the most part direct copies of the entries made in the Estates' books; and I shall be much obliged to my friends if they will compare these printed Registers with the originals, in order to eliminate any errors which may have been made in the copies sent me for reduction and publication.

Should any errors be detected, a list of them will be subsequently published, and the proper corrections made in any further discussion of the Rainfall for the ten years from 1870 to 1879 inclusive.

I am also indebted to Mr. G. N. Cox for the Rainfall at a few places about the year 1870, and for the whole of the Register at Ashley Hall, published some years ago in the *Journal of the Meteorological Society of London.*

(2.) In reducing the Register kept at any place the first thing to be done is to obtain by lateral addition the Total Rainfall for each year from the totals for each month; we next obtain the mean or average Rainfall for each month from the commencement of the Register to the end of 1879*; and, lastly, we find the mean Annual Rainfall at the place by adding laterally the means for each month.

These results are then collected into groups as in Tables I, II, III, IV, and V, which may be termed the Local Rainfall Tables to distinguish them from Tables A, B, C, D, and E, which may be termed the Annual Rainfall Tables.

In the latter Tables a large number of Registers have been employed, many of which have been kept for only a short time; large Tables† were drawn up for each year from 1870 to 1879, and all the Registers on hand for that year were duly entered in their proper Divisions; and the results of each year are shown in the Tables A, B, C, and D.

In forming these Local and Annual Tables a valuable check is found in the circumstance that the sum of all the vertical additions must be equal to the sum of all the lateral additions; and the same applies to any perfect Register; but if the registration was omitted or lost for any month, the total for the year cannot be obtained and the check cannot be applied. The process of reduction however is correct, and very accurate results may be obtained from broken Registers kept for a considerable number of years.

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* Or to the end of the Register.

† Carefully preserved, but considered too voluminous for publication.

For instance, my copies of the Registers at Newcastle, Up-Park Camp, and Mahogany Hall are very imperfect but extend over a considerable length of time; consequently the mean Monthly Rainfall, and then the mean Annual Rainfall may be obtained with accuracy for each place. The Registers for these three places are not published, but their results are given in the Local Tables; this would increase the number of places to 64, but it is necessary to omit the published Register at Hampstead which refers to the years 1857-1862, and therefore entirely precedes our decennial period. Consequently the Local Tables are based upon 63 important Registers.

(3.) The Local Tables are intended to be used for purposes of comparison, and chiefly with the current Rainfall published in the *Gazette* from month to month. In this way a very simple and accurate estimate may be made as to the amount of the Rainfall above or below its monthly average. But as we cannot rely upon the continuation of the Registration at all these places, their number should be greatly increased; and then the results shown in Table V. would agree with the results shown in Table E. The present difference between these Tables may be taken as a measure of the inaccuracy due to combining comparatively few Registers commencing at any time between 1870 and 1879, or rather between 1862 and 1879, the period of our longest Register; and it will be noticed that these Tables, V and E, differ for the most part by only a few tenths of an inch.

Assuming that the gauges are correctly classified in their proper divisions, the more gauges registered the greater the accuracy: and it is in this way we hope to obtain more correct results for the present decennial period, 1880 to 1889, from at least 180 gauges which are now registered.

(4.) With regard to the integrity of the past and present Registration, from time to time I have called attention by letter to apparent discrepancies in the returns and copies sent me, but the replies have invariably been satisfactory from their conclusiveness, except perhaps as to some confusion caused by the Estates' accounts being made up once a month for the nearest integral number of weeks and not for the 30 or 31 days; this may easily be remedied by a note to the Rainfall column in the Estates' books, stating at the end of the last week the total Rainfall for the calendar month in question.

However there must be a certain proportion of error due to imperfect gauges, bad positions, and carelessness on the part of the observers: but noticing that the proportion must always be nearly constant, its effect will be eliminated by the system of comparison.

(5.) The division of the Island into different Rainfall areas is very important. If we compare these Local Rainfall Tables which are based upon 63 Registers with the similar Tables published in the *Handbook of Jamaica* for 1881, which were based upon 39 Registers, we shall find no difference worth recording, so that the increase in the number of Registers employed has only resulted in a probable increase of numerical accuracy; and to avoid writing in different words to the same effect, we shall make the following extract from the article on Meteorology in that *Handbook*:—

"It appears that while the May and October rains are everywhere strongly marked, the northern part of the Island has winter rains in November, December, and January, the southern part has summer rains in August and September, and each part is further divided by the amount of the rainfall, thus giving four Divisions.

"The North-Eastern Division is cut off by a straight line drawn from Port Morant to St. Ann's Bay; it includes the lofty range of the Blue Mountains, and their continuation as the hills of St. Mary; it faces the rain-bringing winds of winter; and it has a large Rainfall in November, December, and January, as well as in May and October. This Division has the greatest annual rainfall.

"The Northern Division includes the parishes of St. Ann, Trelawny, and St. James. It is that part of the Island which lies to the north of those broken ranges of hills which run through the centre of the Island in a direction more or less parallel to the Blue Mountain range. The Annual Rainfall is less than in the first Division, but it has the same characteristics.

"The West Central Division stretches in the same direction from Chapelton to Lucea. It is deprived of the greater part of the winter rains by the two former divisions whose hills precipitate the abundant vapour in the east-north-easterly winds; but it has well-marked summer rains in August and September, as well as the usual rains in May and October. It has a larger annual rainfall than the Northern Division.

"The last and Southern Division has the same characteristics as the third, but the annual rainfall is much smaller."

Of course there must be a little uncertainty about places near the boundary lines of the Divisions; Spring Vale in the Northern Division may finally be transferred to the West Central; Tryall (in Hanover) in the West Central has the characteristics of the Northern; and the West Central Division reaches eastwards perhaps as far as Stony Hill and Castleton Gardens.

The following are the Tables arranged as described above; the construction of Table F, a most useful summary of the Annual Tables, requires no description.

I.—NORTH-EASTERN DIVISION, 1870-1879.

PLACE.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Morant Point Light-House...	5.28	2.98	2.14	3.90	9.26	6.24	3.48	5.46	7.64	13.40	8.72	6.78	75.28
Cinchona Plantation ...	10.60	2.56	8.83	9.34	9.72	6.33	4.78	8.18	13.21	20.58	13.66	13.83	121.62
Newcastle: Military Hospital	6.39	3.19	5.46	9.65	10.46	5.63	5.94	7.88	12.66	19.55	12.18	10.21	109.20
Stony Hill: Reformatory ...	4.82	2.65	4.14	5.76	9.39	6.01	4.80	12.66	10.26	15.60	8.65	3.71	88.45
Castleton Gardens ...	9.71	2.09	4.73	6.14	12.28	8.24	7.32	10.48	11.22	12.49	10.68	13.17	108.55
Water Valley, St. Mary ...	10.72	3.68	4.80	3.78	9.12	4.88	4.43	4.24	7.28	8.69	9 82	10.25	81.69
New Ramble ,, ...	7.68	4.25	6.55	3.04	8.81	4.23	3.65	5.69	5.88	7.08	11.69	10.58	79.13
Unity Valley, St. Ann ...	7.63	2.34	4.97	5.22	11.15	8.70	6.91	5.33	7.62	7.85	7.59	10.74	86.05
Albion ,, ...	6.15	3.30	4.18	4.19	8.62	5.58	4.13	5.85	6.36	7.38	10.23	8.07	74.04
Bradfield ,, ...	8.24	4.57	5.58	4.11	9.50	4.86	4.28	5.05	6.19	7.67	13.16	10.91	84.12
Drax Hall ,, ...	7.30	4.52	4.04	2.43	7.74	3.26	2.91	3.81	4.21	7.30	11.06	8.57	67.15
Mean of 11 places ...	7.68	3.28	5.04	5.23	9.64	5.81	4.79	6.79	8.41	11.60	10.68	9.71	88.66

II.—NORTHERN DIVISION, 1870-1879.

PLACE.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Mahogany Hall, Trelawny ...	3.95	1.74	1.68	2.43	8.50	2.77	5.04	6.34	4.14	5.02	4.19	3.76	49.56
Hopewell " ...	7.21	2.22	3.06	3.37	7.39	3.62	4.16	5.50	5.11	6.08	7.97	9.75	65.44
Brampton Bryan " ...	5.32	1.64	2.40	2.42	7.27	2.65	3.37	4.64	4.34	5 28	6.43	7.24	53.00
Bryan Castle " ...	5.31	1.94	2.34	2.23	6.74	2.48	2.46	3.54	4.04	5.18	6.61	7.61	50.48
Braco " ...	5.01	2.21	2.10	2.38	6.74	2.37	2.41	3.88	4.55	4.81	6.13	7.20	49.79
Harmony Hall " ...	4.32	2.44	1.96	1.62	5.79	1.68	1.85	2.82	4.61	4·14	6.46	7.24	44.93
Lancaster " ...	5.12	2.32	2.56	2.14	6.86	2.30	2.66	3.87	4.80	5.16	6.76	7.57	52.12
Vale Royal " ...	5.39	2.73	2.66	2.80	8.09	3.39	3.48	5.44	4.98	5.91	7.05	9.29	61.21
Hyde " ...	6.05	2.28	4.17	2.73	10.86	4.81	6.22	7.12	7.03	7.59	7.52	8.08	74.46
Gibraltar " ...	5.19	1.13	2.67	1.81	9.04	3.50	4.05	4.83	6.77	7.04	5.81	5.83	57.67
Georgia " ...	5.02	2.53	2.42	2.19	7.99	2.94	2.92	4.64	4.08	5.29	6.10	8.41	54.53
Steelfield " ...	5.03	1.77	2.52	2.35	7.55	3.87	3.07	4.66	4.51	5.98	5.74	7.99	55.04
Lottery " ...	4.18	2.02	2.30	2.06	8.15	3.39	2.40	3.96	4.77	6.12	4.93	5·83	50.11
FALMOUTH " ...	4.01	1.59	2.03	1.80	6.51	2.01	1.49	3.00	3.29	6.07	4.93	5.05	41.78
Golden Grove " ...	4.43	3.07	5.43	2.13	8.37	5.79	5.70	5.50	6.90	6.66	5.71	5.33	65.02
Green Park " ...	5.18	1.58	2.51	1.54	8.30	2.68	2.40	3.79	4.68	5.95	6.15	5.87	50.63
Tilston " ...	5.52	1.40	4.59	2.39	8.94	4.34	4.44	5.94	4.26	6.69	5.04	5.67	59.22
Orange Valley " ...	4.79	2.57	2.28	2.20	6.70	2.80	2.84	3.57	2.73	5.31	5.24	6.99	48.02
Dundee " ...	5.31	2.57	3.22	2.50	6.05	3.26	3.91	5.36	3.98	5.70	7.55	6.46	55.87
Gales Valley " ...	4.47	1.97	2.35	2.06	8.16	5.66	5.30	6.88	5.73	7.43	4.73	5.60	60.34
Content, St. James ...	4.43	2.21	3.01	2.45	8.93	3.73	2.54	5.58	4.44	6.65	4.54	6.95	55.46
Spring Vale " ...	5.65	2.04	3.77	4.48	12.02	9.21	8.29	12.84	9.72	8.62	5.93	6.67	88.34
Latium " ...	5.10	1.53	2.44	3.27	10.34	7.71	5.70	8.67	5.67	9.52	5.41	5.98	71.34
Success " ...	4.51	1.84	2.30	2.11	5.41	2.05	1.51	2.59	3.68	5.37	4.96	3.86	40.19
Running Gut " ...	3.78	1.43	1.60	1.56	6.10	2.32	1.11	2.33	3.66	5.63	4.95	5.71	40.18
Salters Hill " ...	5.03	2.86	3.09	3.45	12.93	8.23	6.99	8.47	7.21	8.53	7.58	6.77	81.14
Irwin " ...	4.32	1.45	2.62	2.58	8.93	6.26	3.07	6.40	6.75	8.10	5.95	4.86	61.29
Catherine Mount " ...	4.36	1.63	1.77	2.99	8.43	6.55	4.89	8.31	6.10	7.67	4.16	6.74	63.60
Mean of 28 places ...	4.93	2.03	2.71	2.43	8.11	4.01	3.72	5.37	5.09	6.34	5.84	6.58	57.16

III.—WEST CENTRAL DIVISION, 1870-1879.

PLACE.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
CHAPELTON: District Hospital ,...	2.37	2 68	3.89	2.72	8.29	4.92	4.37	10.28	8.09	13.40	4.34	3.09	68.64
Pennants, Clarendon ...	1.98	1'88	6.40	2.56	11.70	6.49	6.71	12.62	9.15	14.03	4.95	3.58	82.05
Whitney, Manchester ...	2.76	2·05	5.94	2.40	13.38	8.69	8.65	11.86	9.51	15.40	6.03	3.31	89.98
Cave Valley, St. Ann ...	2.95	2·66	4.51	4.55	11.93	5.76	5.15	8.68	7.36	10.41	5.26	2.75	71.97
MANDEVILLE: District Prison	3.37	2'47	4.76	3.98	12.76	6.46	6.08	10.60	10.07	17.19	6.56	3.84	88.14
Marshall's Pen, Manchester	4.01	3'55	4.80	6.52	12.29	8.89	7.23	10.08	6.93	14.33	5.68	3.30	87.61
Copse, Hanover ...	3.99	1'88	2.74	7.13	11.91	8.85	8.66	12.70	10.79	10.94	7.61	4.67	91.87
Burnt Ground, " ...	3.18	1'98	4.35	5.19	15.42	10.40	9.18	13.66	11.24	9.99	5.27	4.33	94 19
Cacoon Castle, " ...	4.87	1·64	2.76	4.01	13.42	10.51	7.75	10.86	9.32	8.11	5.89	6.76	85.91
Tryall, " ...	2.13	1·23	0.99	2.20	5.46	7.98	5.56	6.06	4.67	6.85	3.64	2.08	48.85
Windsor (Savanna-la-Mar)	1.89	2.59	2.89	5.11	11.06	6.68	7.59	7.17	6.93	8.42	4.52	2.27	67.12
Orange Cove, Hanover ...	3.96	2.49	2.64	3.31	8.49	7.72	6.62	7.45	8.19	9.06	4.84	4.06	68.83
Mean of 12 places ...	3.12	2,28	3.89	4.14	11.34	7.78	6.96	10.17	8.52	11.51	5.38	3.67	78.76

IV.—Southern Division, 1870-79.

Place.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Hope Reservoirs ...	2.90	1.13	2 61	2.43	5.85	4.17	3.35	8.13	7.78	9.56	5.04	3.04	55.99
Monalérie, St. Andrew ...	1.56	1.21	1.60	1.48	4.92	3.55	2.73	6.56	7.20	11.64	5.71	2.37	50.31
Up-Park Camp ...	1.63	0.78	1.23	1 31	7.88	2.52	2.03	5.60	5.45	13.80	5.06	3.18	50.27
Kingston :													
Public Works Office ...	1.78	1.02	1.47	1.19	4.82	3.32	2.03	6.01	5.03	10 28	3.90	2.33	43.18
Palisadoes Plantation ...	1.70	1.36	0.77	1.96	6.60	6.55	3.92	8.29	3.21	12.56	5.23	1.79	51.94
Plumb Point Light House	1.16	1.04	0.94	1.13	4.64	3.79	2.17	5.32	4.50	9.96	3.50	1.57	39.52
Ewing's Caymanas, St. Catherine ...	2.18	1.82	2.14	2.41	7.27	3.80	2.99	7.16	7.49	9.73	3 94	2.06	52.49
Halse Hall, Clarendon ...	2.26	1.43	2.96	3.42	12.08	5.25	4.95	9.53	6 72	11.61	4.88	2.31	67.40
Ashley Hall " ...	1.85	1.51	2.36	1.88	6.11	1.64	1.44	5.15	8.06	8.24	4.66	1.14	43.84
Denbigh " ...	1.75	1.64	2.33	2 23	8.90	5.67	5.24	5.80	5.54	9.29	5.31	2.00	53.70
Fullerswood Park, St. Elizabeth ...	1.59	1.28	2.66	3 64	5 94	2.64	3 99	6.12	6.44	6.87	5.34	2 41	48.92
Black River " ...	1.75	1.85	2.44	3.10	6.95	2.68	5.16	7.21	5.47	9.32	5.43	2 29	53.25
Mean of 12 places ...	1.84	1.32	1.96	2.18	6.83	3.74	3.17	6.72	6.02	10.24	4.67	2.21	50.90

V.—General Table of the Local Rainfall.

From about 1870 to the end of 1879.

Division.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
North Eastern Division ...	7.68	3.28	5.04	5.23	9.64	5.81	4.79	6.79	8 41	11.60	10.68	9.71	88.66
Northern " ...	4.93	2.03	2.71	2.43	8.11	4.01	3.72	5.37	5.09	6.34	5.84	6.58	57.16
West Central " ...	3.12	2 28	3.89	4.14	11.34	7.78	6.96	10 17	8.52	11.51	5 38	3.67	78.76
Southern " ...	1.84	1.32	1.96	2.18	6.83	3.74	3.17	6.72	6.02	10·24	4.67	2.21	50.90
The Island ...	4.39	2.23	3.40	3.50	8.98	5.34	4.66	7.26	7.01	9.92	6.64	5.54	68.87

A.—North-Eastern Division.

Year.	No. of Places.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
1870	6	7.44	7.39	2.38	4.12	16.48	3.30	4.81	5 97	10.29	17.75	13.96	11.71	110.60
1871	8	4.60	2.43	2.48	3.79	6.60	3.10	4.67	4.69	8.20	10.96	9.65	8.23	69.45
1872	9	5.02	3.05	4.51	3.87	5.48	2.20	3 23	5.54	6.15	8.11	4.49	7.77	59.42
1873	6	13.11	3.05	11.68	1 31	3.60	2.47	2.06	8.35	12.96	9.56	7.37	8.60	84.08
1874	7	8.07	4.15	0 61	6.10	14.68	4.43	3.10	10.26	6.60	16.62	17.57	4.99	97.18
1875	11	4 12	1.30	5.00	4.70	9.47	4.86	4.90	5.22	10.70	6.21	4.04	11.37	71.89
1876	11	13.35	1.24	3.16	5.84	7.18	6.28	8.51	6.96	6.48	11.55	13.63	7.10	90.38
1877	14	11.98	2.01	6.31	4.73	18.26	8 29	6.02	1.50	5.23	4.96	13.13	18.27	100.72
1878	13	9.40	4.23	4.48	1.27	6.01	8.11	5.48	10.37	9.42	15.63	12.18	17.55	104.12
1879	23	6.77	8.04	10.52	12.57	11.75	15 16	5.13	11.35	7.87	18.07	10.91	4.41	122.55
Means	11	8.39	3.69	5 11	4.83	9.95	5 82	4.79	6.93	8.39	11.94	11.19	10.01	91.04

B.—Northern Division.

Year.	No. of Places.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		In.	In.	In.	In.	In.	In.	In.	In	In.	In.	In.	In.	In.
1870	15	5.52	6.28	2.57	0.59	16.47	2.65	2.25	3.40	10.36	9.07	16.36	7.57	83.09
1871	17	2.73	0.94	1.52	1.29	9.13	1.37	2.65	4.09	3.58	7.90	3.61	3.07	41.88
1872	21	3.57	1.68	3.02	1.59	4.84	2.66	2.74	3.62	4.10	5.23	2.39	5.35	40.79
1873	21	8.66	2.45	3.30	1.07	7.23	1.75	2.21	3.86	4 52	4.95	2.57	10.07	52.64
1874	22	2 14	1.95	0.27	6.06	12.68	4.03	1.94	9.04	8.85	9.70	9.27	2.52	68.25
1875	26	2.95	0.11	1.82	1.44	6 03	3.32	2.78	6.56	4.49	4.52	1.54	11.59	47.15
1876	27	7.18	0.56	1.24	2.24	6.79	5.45	5.49	3.96	2.98	4.32	7.92	6 53	54.71
1877	29	6.41	0.32	5.39	2.50	10.14	3.40	3.34	1.88	3.37	3.97	7.53	8.78	56.55
1878	29	7.47	2.62	2.47	0.39	4.57	5.20	4.54	6.32	4.21	8.87	5.33	11.00	62.99
1879	51	8.11	5.71	4.08	5.74	8.12	7.35	4.70	7.80	6.12	6.16	5.01	1.54	65.44
Means	26	4.97	2.26	2.57	2.29	8.60	3.72	3.26	5.00	5.26	6.47	6.15	6.79	57.34

C.—West Central Division.

Year.	No. of Places.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
1870	3	1.83	2.93	5.77	4.42	24.35	6.62	6.98	8.39	8.80	21.24	6.71	4.94	102.98
1871	5	1.25	1.03	2.58	5.25	7.43	1.98	5.77	3.25	6.64	9.54	6.67	3.17	54.56
1872	6	2.11	4.24	2.89	1.63	6.87	3.20	3.79	7.19	5.44	7.65	3.27	3.22	51.50
1873	7	7.55	1.89	4.70	1.30	6.58	4.69	4.76	8.75	12.15	9.59	3.06	2.68	67.79
1874	7	1.95	1.77	1.01	3.81	10.88	4.38	3.41	11.43	6.05	10.96	6.01	1.31	62.97
1875	6	2.13	0.53	1.70	3.66	12.64	5.51	5.69	5.95	7.66	6.15	2.58	1.96	56.16
1876	9	1.49	1.34	1.34	7.16	13.31	7.91	10.68	6.39	6.07	17.33	8.70	5.61	87.33
1877	11	3.55	1.06	6.36	2.84	13.03	7.33	6.00	3.13	6.55	5.78	5.50	2.91	64.06
1878	15	4.27	2.81	2.09	0.65	5.84	6.45	6.93	12.05	8.15	11.77	6.15	5.28	72.44
1879	31	0.88	4.31	7.47	5.93	9.89	10.79	6.36	12.96	10.13	14.94	3.39	0.49	87.54
Means	10	2.70	2.19	3.59	3.67	11.08	5.89	6.04	7.95	7.76	11.50	5.20	3.16	70.73

D.—Southern Division.

Year.	No. of Places.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
1870	6	1.18	0.78	1.67	2.03	12.24	1.77	3.26	5.11	2.76	18.90	7.99	3.38	61.07
1871	5	1.01	1.99	2.58	3.51	2.56	1.49	2.06	1.80	4.38	7.14	3.60	2.34	34.46
1872	9	1.29	2.38	1.81	1.17	3.53	1.60	1.79	4.60	2.51	3.37	2.38	2.59	29.02
1873	10	3.29	0.37	2.19	0.82	2.83	1.41	1.23	9.08	13.30	10.18	1.13	1.88	47.71
1874	8	1.60	0.94	0.56	1.63	4.34	2.98	1.60	7.87	5.79	9.49	9.21	1.34	47.35
1875	9	1.08	0.72	1.85	2.41	6.01	1.28	2.12	2.78	7.56	5.44	1.20	2.02	34.47
1876	11	1.97	0.71	0.78	3.48	5.66	1.98	7.91	3.85	5.24	12.25	5.59	3.57	52.99
1877	17	1.80	1.31	3.48	1.57	18.70	6.97	3.35	1.01	4.84	3.31	4.37	1.56	52.27
1878	30	4.26	1.52	2.07	0.50	3.03	6.75	6.44	14.47	7.93	8.89	5.63	4.62	66.11
1879	30	0.49	3.14	3.90	4.89	6.81	9.25	1.69	17.15	5.38	24.69	1.84	0.62	79.85
Means	14	1.80	1.39	2.09	2.20	6.57	3.55	3.14	6.77	5.97	10.37	4.29	2.39	50.53

E.—General Table of the Annual Rainfall. *(1.)*

From 1870 to 1879.

Division.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
North-Eastern Division ...	8.39	3.69	5.11	4.83	9.95	5.82	4.79	6.93	8.39	11.94	11.19	10.01	91.04
Northern „ ...	4.97	2.26	2.57	2.29	8.60	3.72	3.26	5.00	5.26	6.47	6.15	6.79	57.34
West Central „ ...	2.70	2.19	3.59	3.67	11.08	5.89	6.04	7.95	7.76	11.50	5.20	3.16	70.73
Southern „ ...	1.80	1.39	2.09	2.20	6.57	3.55	3.14	6.77	5.97	10.37	4.29	2.39	50.53
The Island ...	4.46	2.38	3.34	3.25	9.05	4.74	4.31	6.66	6.85	10.07	6.71	5.59	67.41

F.—General Table of the Annual Rainfall. *(2.)*

Year.	Divisions.				The Island.
	N.E.	N.	W.C.	S.	
	In.	In.	In.	In.	In.
1870 ...	110.60	83.09	102.98	61.07	89.44
1871 ...	69.45	41.88	54.56	34.46	50.09
1872 ...	59.42	40.79	51.50	29.02	45.18
1873 ...	84.08	52.64	67.79	47.71	63.06
1874 ...	97.18	68.25	62.97	47.35	68.94
1875 ...	71.89	47.15	56.16	34.47	52.42
1876 ...	90.38	54.71	87.33	52.99	71.35
1877 ...	100.72	56.53	64.06	52.27	68.40
1878 ...	104.12	62.99	72.44	66.11	76.42
1879 ...	122.55	65.44	87.54	79.85	88.84
Means ...	91.04	57.34	70.73	50.53	67.41

(6.) In this decennial period the Island Rainfall was greatest in 1870 and 1879, and least in 1872, the measures being 89 and 45 inches respectively.

The Cinchona Plantation has the largest yearly Rainfall, namely, 122 inches; Plumb Point Light-house, Success, and Running Gut have the smallest yearly Rainfall, namely 40 inches.

Referring to the Registers below the following are the heaviest monthly Rainfalls:—

				Inches.
May,	1870	...	Windsor (Sav.-la-Mar) ...	30
Oct.,	„	...	Mandeville ...	40
„	1876	...	„ ...	30
„	„	...	Cinchona Plantation ...	32
May,	1877	...	„ „ ...	37
Dec.,	„	...	„ „ ...	44
„	„	...	Castleton Gardens ...	33
„	1878	...	Cinchona Plantation ...	30
Oct.,	1879	...	„ „ ...	35
„	„	...	Kingston ...	31
„	„	...	Monaltrie ...	31
„	„	...	Palisadoes ...	31
„	„	...	Morant Point Light-house ...	31

The rains in October, 1879, produced destructive floods; an account of these rains was given in the *Supplement of the Jamaica Gazette*, July 8, 1880. It is here sufficient to say that 13½ inches fell at Serge Island Estate in the Yallahs Valley on October 11, 1879.

But this large Rainfall in 24 hours was exceeded at the Cinchona Plantation during the Hurricane on the night of the 18th and 19th of August, 1880, when 20 inches were registered; and at Denbigh in Clarendon, 24 inches fell on the 5th of June, 1868!

(7.) From these extremes we now pass to the average fall of rain in one rainy day at different times of the year. The following Table applies to Denbigh where our longest and best Register has been kept:—

Months.		Average number of days on which rain fell.		Average Rainfall for each rainy day.
				In.
January	...	4.7		0.37
February	...	4.4	...	0.37
March	...	5.1	...	0.46
April	...	5.3	...	0.42
May	...	8.5	...	1.05
June	...	5.6	...	1 01
July	...	5.6	...	0.58
August	...	8.2	...	0.71
September	...	8.3	...	0.67
October	...	11.2	...	0.83
November	...	7.6	...	0.70
December	...	4.6	...	0.43
Means	...	6.6	...	0.63

The number of days on which rain fell are not published from month to month in the *Jamaica Gazette*, because they have local and special rather than general interest, and for the present we must restrict ourselves to general conclusions.

(8.) Now in the *Natural History of Jamaica* written by Sir Hans Sloane some years after his sojourn in the Island in 1687 and 1688 we find that he alluded to the May and October rains, to the winter rains on the north side of the Island, to the summer rains on the central hills, and to the small Rainfall on the southern plains. Consequently the characteristics of the Rainfall have not altered for two hundred years.

This conclusion is important in consequence of the prevalent opinion that the "seasons" have changed, giving us less rain at present, and more irregularly. But this change is not apparent from the Registers at Albion, Bradfield, Denbigh, and Windsor, nor yet from the important Register at Hampstead from 1857 to 1862. Perhaps this opinion is due to the first impression made by these tropical rains upon all new comers from England and Scotland.

But there is some evidence that the amount of the Rainfall has remained unchanged for a long time past as well as its characteristics. In Long's *History of Jamaica* published in 1774 we read: "By a measurement taken of the quantity of rain which fell in the parish of Westmoreland in 1761, the whole amounted to 63 inches and about three-fourths of an inch . . . . Westmoreland being supposed one of the wettest parishes." Now if we refer to Dr. Richard Harvey's valuable Register* kept at Windsor, near Savanna-la-Mar, from 1865, we find that the mean yearly Rainfall for fourteen years is 67 inches; and this agreement may be taken to counterbalance the general description of Sir Hans Sloane which certainly indicates a heavier Rainfall at Spanish Town than we now have.

* This was the only Register kept in Westmoreland until the last few years, and without it there would be doubt as to which Division of the Island the whole parish of Westmoreland belongs.

(9.) Glancing through the Annual Rainfall Tables we see that for the most part there is no long continued spell of drought or excessive rains: in 1872, the driest year, both the May and October "seasons" failed; but the rains in December, 1872, and January, 1873, were above the average, though wholly insufficient to make compensation for the year.

This gives us the principle of "short-time compensation"; if any month has a Rainfall below its average, the chances are in favour of the next month having a Rainfall above its average; if two or three consecutive months are below their average, the chances are 2, 3, or 4 to 1, or whatever the true figures may prove to be, in favour of the next month being above its average; and so on, interchanging "above" and "below" when necessary.

(10.) Table F. shows another important principle, and one for which we were unprepared: whatever the Rainfall may be for any given year, each Division has its average proportion, or nearly so. This principle may be referred to as the "annual constancy of the Divisional proportion;" and should the present decennial period prove its truth, it will be of the greatest use in discussing Rainfall prospects.

(11.) In the following Table we have taken from the *Handbook* for 1881 the numbers of hogsheads of Sugar and puncheons of Rum exported from the Island (pp. 353 and 354), and also the number of acres of Canes under cultivation (p. 361); and so deduced the number of casks of Sugar and Rum per acre. The latter figures may then be compared with the Rainfall of each preceding year.

Year.	Hogsheads Sugar.	Puncheons Rum.	Casks Sugar and Rum.	Acres of Canes.	Casks per Acre.	Rainfall preceding year in Inches.
1871	52,583	25,186	77,769	47,559	1.635	89
1872	50,878	25,997	76,875	48,465	1.586	50
1873	42,566	22,104	64 670	48,560	1.332	45
1874	42,531	25,159	67,690	47,785	1.416	63
1875	41,888	27,357	69,245	48,245	1.435	69
1876	43,321	28,127	71,448	47,683	1.498	52
1877	45,064	26,586	71.650	46,023	1.557	71
1878	39,810	23,799	63,609	46,383	1.373	68
1879	43,398	24,543	67,941	44.860	1.514	76
1880	46,867	24,315	71,182	43,071	1.653	89

If we form the figures in the latter columns into two groups, the first applying to the five years of larger Rainfall, and the second to the five years of smaller Rainfall, we have:

1,559 casks per acre, 79 inches (preceding) Rainfall
1,441 " 56 " "

so that the difference due to a larger or smaller Island Rainfall is on an average hardly one-tenth of the Island Export Crop:—Estates in wet districts making larger crops in dry years, and *vice versâ*.

But still one-tenth of the Export Crop represents in value £100,000; and we have not even alluded to Coffee and various Minor Products; each crop should be treated according to locality and the monthly Rainfall, and then only may we expect to trace the direct effect of Rainfall on the industries of the Island.

MAXWELL HALL.

Kempshot, September 1st, 1883.

Montego Bay P.O.

JAMAICA. OCTOBER 13, 1883. No. 32.

WEATHER REPORT

FOR THE MONTH OF

SEPTEMBER, 1883.

Published by Authority.

JAMAICA:
GOVERNMENT PRINTING AND STATIONERY ESTABLISHMENT, 79 DUKE STREET, KINGSTON.

1883.

METEOROLOGICAL RESULTS FOR SEPT. 1883.

KINGSTON :—

	7 a.m.	3 p.m.	11 p.m.	Mean.
	in.	*in.*	*in.*	*in.*
Barometric pressure ...	29.990	29.922	30.002	29.972
Temperature of the air ...	77°.8	85°.4	76°.9	80°.0
Dew-point ...	73.7	75.7	74.2	74.5
Humidity ...	87	73	91	84
Maximum Temp. ...		...		88°.0
Minimum Temp. ...		...		74°.0
Range of Temp. ...		...		14°.0
Minimum Temp. on Grass		...		69°.3
Direction of the Wind		...		S. E.
Velocity of Wind in Miles per hour		...		3.7
Percentage of Cloud		...		77

Total Rainfall—3.63 inches.

Average Weather :—Cloudy and unsettled.

The highest temperature was 90°.3 recorded on the 6th ; the lowest was 71°.7. recorded on the 16th; the extreme range was therefore 18°.6. The lowest temperature on the grass was 66°.5 recorded on the 27th.

CINCHONA PLANTATION :—

			in.
Barometric Pressure	7 a.m.	...	25.270
"	3 p.m.	...	25.242
Temperature of the air	7 a.m.	...	63°.1
"	3 p.m.	...	66.2
Dew-point ...	7 a.m.	...	59.1
" ...	3 p.m.	...	63.2
Maixmum Temperature		...	70.5
Minimum Temperature		...	60.3
Range of Temperature		...	10.2
Direction of the Wind			Var.
Velocity of Wind in Miles per hour		...	2.5
Temperature 6 feet under ground		...	65°

NOTE—The Barometric pressure is the reading of the Barometer corrected for instrumental error and reduced to 32°, that of Kingston being further reduced to the sea-level. The Thermometers are similarly exposed at the two stations; their readings have all been corrected. The following are the elevations of these stations above the sea-level : —

Kingston (Rae Town)	5 feet
Cinchona Plantation	4,850 "

At New Haven Gap (in the Blue Mountain Range, elevation about 5,600 feet) the mean maximum and minimum temperatures were 75°.8 and 55°.7 respectively.

At King's House (in the plains of Lignanea, elevation about 400 feet) the mean maximum and minimum temperatures were 86°.6 and 70°.2 respectively.

THE HEALTH OF KINGSTON was above the average during September : the death-rate was only 22.2 per thousand against 24.2 per thousand in August.

There were 15 deaths from different forms of Lung-disease, and 2 from Bronchitis; the former were anticipated in the Weather Report for August. There will probably be fewer deaths from Lung-disease during the present month of October.

THE RAINFALL FOR SEPTEMBER, 1883.

The average September Rainfall, given in the second columns for different stations, is taken from the article on Meteorology in the *Handbook of Jamaica* ; and, as there explained, it applies to the September Rainfall during the ten years from 1870 to 1879 inclusive,

NORTH-EASTERN DIVISION.

		September. 1883.	September. Average.
		In.	In.
Morant Point L. H.	St. Thomas	...	7.64
Hordley	...	12.83	...
Holland	...	11.69	...
Leith Hall	...	...	...
Potosi	...	13.22	...
Boston	Portland	11.82	...
Port Antonio	...	4.37	...
Spring Garden	...	...	...
Chepstow	...	...	...
Woodstock	...	2.82	...
Cinchona Plantation	St. Andrew	7.18	13.21
New Haven Gap	...	4.62	...
Newton	...	5.85	...
Tweedside	...	...	...
Stony Hill	...	8.02	...
Castleton Gardens	St. Mary	...	11.22
Dover	...	4.09	...
Annotto Bay	...	4.57	...
Water Valley	...	5.47	7.28
Quebec	...	...	...
Port Maria	...	6.42	...
New Ramble	...	6.10	5.88
Gayle	...	6.63	...
Llanrumny	...	5.38	...
Goshen	...	7.24	...
Rio Hoe	St. Ann	4.36	...
Unity Valley	...	4.76	7.62
Albion	...	8.03	6.36
Bradfield	...	4.74	6.19
Drax Hall	...	6.66	...
Seville	...	4.76	4.21
Richmond Estate	...	6.52	...
Llandovery	...	3.19	...
	Mean	6.59	7.73

NORTHERN DIVISION.

		September. 1883.	September. Average
		In.	In.
Lillyfield	St. Ann	8.82	...
Home Castle	...	10.25	...
Richmond Pen	...	7.25	...
Tolchis Pen	Trelawny	10.20	...
Mahogany Hall	...	9.34	...
Hopewell	...	8.00	5.11
Brampton Bryan	...	...	4.34
Bryan Castle	...	...	4.04
Nightingale Grove	...	6.92	...
Braco	...	6.07	4.55
Arcadia	...	6.13	...
Harmony Hall	...	4 92	...
Lancaster	...	5.55	4.80
Vale Royal	...	4.68	4.98
Hyde Hall	...	7.24	...
Hyde	...	...	...
Swanswick	...	8.44	...
Long Pond	...	6.30	...
Georgia	...	3.77	4.08
Steelfield	...	4.46	...
Etingdon	...	3.62	...
Oxford	...	5.39	...
Cambridge	...	7.38	...
Spring	...	3.09	...
Lottery	...	7.26	4.77
Pembroke	...	7.45	...
Falmouth	...	...	3.29
Holland Pen	...	5.26	...
Golden Grove	...	6.70	...
Fontabelle	...	...	...
Green Park	...	5 10	...
Tilston	...	8.92	...

NORTHERN DIVISION *continued.*

		SEPTEMBER. 1883. In.	Average. In.
Orange Valley	Trelawny	4.21	2.73
Kent	...	4.20	...
Dundee	...	6.37	3.98
Gales Valley	...	7.60	5.73
Hampden	St. James	7.94	...
Greenwood	...	3.91	...
Lima	...	...	...
Content	...	...	4.44
Guilsbro'	...	9.30	...
Spring Vale	...	20.15	9.72
Latium	...	15.67	...
Success	...	4.00	3.68
Cinnamon Hill	...	...	...
Rose Hall	...	...	...
Running Gut	...	2.98	3.66
Tryall	...	3.75	...
Irwin	...	11.00	6.75
Ironshore	...	4.53	...
Providence	...	5.50	...
Montego Bay (Market)	...	6.86	...
Catherine Hall	...	7.70	...
Catherine Mount	...	9.09	6.10
Fairfield	...	9.26	...
	Mean	7.01	4.95

WEST CENTRAL DIVISION.

		SEPTEMBER. 1883. In.	Average. In.
Linstead	St. Catherine	9.30	...
Worthy Park	...	...	...
Lloyds	...	23.13	...
Chapelton	Clarendon	4.36	8.09
Pennants	...	...	...
Whitney	...	12.26	...
Cave Valley	St. Ann	6.80	7.36
Hanbury	Manchester	10.20	...
Mandeville	...	...	19.07
Marshall's Pen	...	...	...
Derry	...	...	...
Bogue	St. Elizabeth	11.78	...
Barton Isles	...	15.95	..
Appleton	...	15.51	...
Maroon Town	St. James	...	...
Holland	St. Elizabeth	11.43	...
Y.S.	...	14.64	...
Ipswich	...	15.68	...
Kepp	...	12.64	...
Mount Charles	...	10.85	...
Mount Edgecombe	Westmoreland	11.76	...
Windsor Forest	...	11.23	...
Kew Park	...	12.66	...
Hazelymph	St. James	11.36	...
Chester Castle	Hanover	9.44	...
Copse	...	9.94	...
Burnt Ground	...	11.60	...
Haughton Grove	...	13.11	...
Kempshot	St. James	13.10	...
Bandon	...	...	...
Anchovy	...	11.91	...
Wiltshire	...	11.41	...
Round Hill	Hanover	6.59	...
Cacoon Castle	...	9.46	...
Sod Hall Pen	...	14.25	...
Golden Grove	...	14.90	...
Tryall	...	6.90	...

WEST CENTRAL DIVISION, *continued.*

		SEPTEMBER. 1883. In.	Average. In.
Carawina	Westmoreland	...	...
Sweet River	...	7.01	...
Paradise Pen	...	7.45	...
Roaring River	...	...	...
Fort William	...	11.07	...
Mackfield	...	17.36	...
Mesopotamia	...	8.62	...
Cornwall	...	...	...
Windsor (Sav.-la-Mar)	...	4.85	...
Fontabelle	...	11.10	...
Frome	...	11.28	...
Belle Isle	...	10.86	...
Grange Hill	...	...	...
Retreat	...	4.92	...
Point	...	...	...
Kew Estate	...	7.43	...
Haughton Court	Hanover	6.44	...
Orange Cove	...	6.08	8.19
Prospect	...	...	...
Haughton Hall	...	...	...
Abingdon	...	7.69	...
Phœnix	...	...	...
	Mean	10.82	8.43

SOUTHERN DIVISION.

		SEPTEMBER. 1883. In.	Average. In.
Albion Hospital	St. Thomas	6.90	...
The Abbey	...	7.29	...
Halberstadt	St. Andrew	8.49	...
Hope Plantation	...	4.22	7.78
Constant Spring	...	4.20	...
Cherry Garden	...	4.70	...
King's House	...	4.45	...
Monaltrie	...	4.48	7.20
Public Works Office, Kingston		3.57	5.03
Palisadoes Plantation	...	1.93	..
Plumb Point L. H.	...	2.10	4.30
Ewing's Caymanas	St. Catherine	...	...
Spanish Town	...	5.75	...
Windsor Park	...	...	...
Hog Hole Pen	...	7.48	...
Headworks, R. C. C.	...	5.77	...
Cedars	...	...	...
Lodge Estate	...	...	...
Roden Pen	...	...	...
Old Harbour	...	5.61	...
Springfield	...	7.04	...
Experiment	Clarendon	...	...
The Bog	...	7.87	...
Greenwich	...	...	...
Yarmouth	...	...	...
Denbigh	...	4.10	5.54
Farm Plantation	Manchester	9.17	...
Great Valley	...	...	...
Stones Hope	...	8.21	...
Pepper	St. Elizabeth	...	...
Long Hill	...	8.72	...
Gilnock Hall	...	11.15	...
Santa Cruz	...	18.18	...
Bloomsbury	...	20.57	...
Black River	...	6.64	5.07
Hodges	...	6.97	...
Font Hill	...	...	...
	Mean	7.14	5.91

COMPARATIVE TABLE.

(Based upon the "Average" Stations only.)

	SEPTEMBER.	
	1883.	Average.
	In.	In.
North Eastern Division	5.86	7.73
Northern "	7.19	4.95
West Central "	6.86	8.43
Southern "	4.18	5.91
The Island	6.02	6.76

The Rainfall for September was therefore about the average; the most noticeable feature this month is the drawing-back of the rains from Westmoreland, where they had been excessive, to the northern shores, where drought had long prevailed.

Severe thunderstorms are reported at the Abbey on the 8th, and at Unity Valley on the 18th.

At the Plumb Point Light House the upper gauge is 68 feet above the lower; these gauges registered 1.59 and 2.10 inches respectively.

EARTHQUAKE No. 16.

The sixteenth Earthquake felt in Kingston since the commencement of the Kingston Meteorological Register in June 1880 occurred early in the morning of the 26th July. It was a very slight shock, and required confirmation in one or two particulars; hence the delay in the publication of the following elements:—

BAR. COR. AND REDUCED.

	In.
24 hours before	30.051
16 " "	30.022
8 " "	30.046
At time of shock	30.029
8 hours after	30.007
16 " "	30.035
24 " "	30.008

The Barometric oscillation is tolerably apparent, but it is to be noticed that the oscillation lagged behind the shock so that the depression occurred eight hours afterwards instead of simultaneously with the shock.

TOTAL MILES OF WIND.

July 24th ...	93	106
25th ...	119	
26th ...	176	142
27th ...	108	

TEMPERATURE OF THE AIR.

July 25th ...	80°.7
26th ...	82.0

CLOUDS AND RAIN.

	Cloud.	per cent.		Rain. in.
July 24th ...	23	41	...	0.00
25th ...	60		...	0.50
26th ...	47	47	...	0.00
27th ...	47		...	0.00

The usual features are not well marked, probably in consequence of the shock occurring mid-way between two days, and of the feebleness of the shock itself.

ASTRONOMICAL NOTES.

SUN-SPOTS AND SOLAR RADIATION.

The cloudy unsettled weather during September rendered it impossible to make any observations of the Solar Radiation, and but few of the Sun-spots.

KEMPSHOT: SEPTEMBER, 1883.

Mean Time. Day.	Mean Time. Hour.	Groups of Sun-spots.	Number of Sun-spots.	Combination Number.
1	19	6	64	81
2	19	7	43	84
10	19	5	36	62
15	19	6	47	76
16	20	5	38	63
17	20	6	35	72
21	19	4	18	46
Means		5.6	40	69

From the 11th to the 16th there was a very large and fine double-spot, brought in and out of view by the rotation of the Sun on his axis.

The above figures give us 9°.86 as the Solar Radiation for September.

WEATHER FORECASTS.

After the Barometric depression from the 6th to the 9th September inclusive, due to the passage of the southern and northern Cyclones, on the 15th it was considered necessary to add to the 7 a.m. daily telegram from Kempshot to Kingston that the depression that morning was probably due to coming rains, in order to allay unnecessary anxiety.

This led to the consideration of Forecasts with the view of supplying the Kingston station with a better idea of the general state of the weather over this part of the Island than could be gained from the actual state at 7 a.m. each morning.

After a week or so it was determined to adopt the following Weather-scale:—

1. Dry and fine;
2. Fine, with perhaps a shower or two;
3. Fair, with perhaps average partial showers;
4. Moderate partial rains;
5. General rains.

This scale simplifies the forecasts and their verification, and it permits the use of fractions:—3.5 characterizing the Weather as between 3 and 4, and so on.

The next step was to adopt a fixed plan of procedure; and on the 2nd October the Weather was rediscussed from the 8th September and the systematic forecasts found satisfactory. They have been continued to date with the following results:—

Verified ...	20
Partly verified ...	4
Not verified ...	1
Forecasts ...	25

A Forecast may be considered *verified* when the difference between the forecast and the subsequent general weather does not exceed half a division of the weather-scale:—*partly verified* when the difference does not exceed one division:—and *not verified* when the difference exceeds one division.

In the single case of failure above, the Forecast was 3.1; but a strong breeze sprang up, and in ordinary language blew away the rain, so that the resulting weather was 2.

Now it is to be understood that these Forecasts chiefly apply to the West Central Division in which the Kempshot Observatory is situated, so that the question arises how far and in what way could such Forecasts be made useful to the Island generally.

The British and American systems characterize the general coming weather over large areas—far larger than Jamaica—and the resulting benefits to large interests, whether public or private, must be very great indeed

But I would be glad to have opinion expressed on this subject with reference to Jamaica before proceeding much further ; a few friends are watching the weather for me throughout the whole length of the West Central District, so that the Forecasts for October will be properly tested ; but if an accuracy of 80 per cent. be considered sufficient, the Forecasts themselves become secondary considerations, and give place to organization and general office-work.

THE SEPTEMBER NORTHERN CYCLONE.

It was hoped that information would have been received from Turks Islands before this Report was written ; the following notes may be interesting however.

Martinique.—The cyclone passed over, or more probably, near Martinique on the night of the 4th and 5th September, doing great damage to shipping.

Dominica.—The centre passed over this island at 1 a.m. on the morning of the 5th. The pressure fell from 30 to 28.98 ; the strongest winds were N.N.E. and S.S.W.; the hurricane did great damage on land ; and at its height there was a shock of earthquake.

Mona Passage.—The "Ice" ship coming to Jamaica encountered the hurricane in the Mona Passage on the 5th.

Nassau.—The cyclone passed over Nassau at 2 p.m. on the 8th. The pressure fell from 30 to 28.87 ; winds N., N.W., and W. The temperature remained steady at 80° all through the hurricane until its close at 4 p.m. when there was a sudden fall of 6° in half an hour ; at 5 p.m. it rose to 79° ; and to 80° again at 7 p.m.

United States.—The cyclone struck the American coast on the 10th ; and it is reported to have passed northwards to Halifax doing immense damage.

As the distance from Dominica to Nassau is about 1,200 statute miles, the cyclone advanced with an average velocity of 14 miles an hour.

MAXWELL HALL.

Kempshot Observatory,
1883, October 8th.